

Plate XX.—*Everhartia lignatilis*, n. sp. Fig. 10. General habit showing rounded mass of extruded spores, $\times 68$. Fig. 11. Sterile and fertile hyphae of sporodochium, showing stages in formation of helicospores, $\times 464$. Fig. 12. Mature spores, $\times 696$.

Plate XX.—*Everhartia hymenuloides* Sacc. & Ell. Fig. 13. Mature spores, $\times 696$. Fig. 14. Spore *in situ*, showing terminal formation, $\times 696$.

Notes on North American Mosses. II.

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DICRANUM PALUSTRE LaPyl.—This species has not been noted as particularly variable as is the case with its congener, *D. scoparium* Hedw. The examination of a large series of specimens, collected in various parts of the northwestern United States by Dr. Julius Röhl in 1888, has shown me that it is almost as polymorphous as *D. scoparium*, and that it intergrades so closely with that species that it is quite impossible to limit it except in a wholly arbitrary way. The var. *paludosum* of *D. scoparium* imitates somewhat the typical *D. palustre* in the rugulose and shorter pointed leaves. But this is a character by no means constant in the latter species. Indeed it is oftener absent than present. There is also no reliable distinction to be drawn from the section of the costa. We have therefore simply to say that those forms with slender pointed often falcate leaves, having the cells somewhat elongated in the upper part, shall be grouped with *D. scoparium*. I have not thought it worth while to characterize separately any of those forms of *D. palustre* (among which the Californian variety *Brewerianum* of Lesquereux may well be placed) which connect with the palustral modifications of *D. scoparium*. If one should begin, the list might rival that of some of the *Sphagna*! On the other hand *D. palustre* shows numerous variations toward forms with broad leaves, entire or coarsely serrated and usually not wrinkled. Three of these I have separated as well-marked varieties,¹ which fall more or less closely into company with the European vars. *juniperifolium* and *polycladon* of the Bry. Eu. Had the intermediate forms been lacking from the collection I should have unhesitatingly established these, or at least the var. *Roellii*, as species.

Having already examined a considerable number of the species of *Dicranum* in determining the Weisiaceæ of Röhl's

¹ Botanisches Centralblatt xliv. 386 (1890).

collection, I hope to study the remaining North American members of the genus shortly.

BARBULA MEGALOCARPA Kindb.—This is the same as *B. ruralis* var. *gigantea* Aust. MS. It is hardly worthy even of varietal rank. Indeed *B. ruralis* is described by Limpricht² as having the awn often reddish and the leaves “*meist mit vorgezogener, selten gerundeter oder ausgerandeter Spitze*”—characters on which Kindberg chiefly bases his *B. megalocarpa*.

WEBERA NUTANS Hedw.—In specimens collected by J. M. Holzinger at Winona, Minn., the cilia are as strongly appendiculate as in any *Eu-Bryum*. Of course such a statement without qualification would simply throw doubt upon the determination. But in this case there can be no mistake. Leaves from the very perichætium whose fruit was examined were used.

ATRICHUM ANGUSTATUM Br. & Sch.—Intermediate forms between this species and *A. undulatum* Beauv. are not uncommon, and some specimens from Washington, D. C., show lamellæ as much as 9 cells wide! One of the striking features of *A. Selwyni* Aust., of which abundant material has lately been received from the north-west, is the wide lamellæ, but they do not much surpass those on the specimens just referred to.

HYPNUM (Thuidium) PYGMAEUM S. & L.—The stems of this species are described as papillose. These “papillæ” are really short, 2—4-celled, papillose, filiform, rudimentary paraphyllia. They resemble in many ways most of the paraphyllia of *H. minutulum*, but are less developed. To call them “papillæ” is a misuse of the word.

HYPNUM (Claopodium) RAMULOSUM Hampe.—I think it probable that this is identical with Hooker’s *H. crispifolium*. This opinion is not based upon a comparison of specimens for they are inaccessible, if indeed they exist. But authentic specimens of *H. crispifolium* agree perfectly with Hampe’s (or Müller’s) description.³ Moreover this species is common in the region from which the supposed *H. ramulosum* comes, while that has never been collected but once. Specimens under this name in the James herbarium from Marin co.,

² Die Laubmoose (Rabenh. Krypt.-Flora iv.) i, 687.

³ Mueller: Synopsis Musc. ii. 486.

California, are *H. crispifolium*. Finally, the descriptions themselves of the two species show no points of specific difference.

HYPNUM (Camptothecium) NUTTALLII Wils. — This species often has the seta twice or thrice as long as the capsule, instead of "scarcely as long". This is shown by the specimens in at least two sets of Sullivant and Lesquereux' Musci Bor. Amer. I. n. 338b, and also by Macoun's n. 280 Canadian Musci, issued under the name of *H. pinnatifidum* S. & L.

HYPNUM (Isothecium) BREWERIANUM Lesq. — The leaf-cells are short-ovate to rhombic. If it is to be retained under Isothecium the subgeneric character "areolation minute, vermicular-oblong" must be corrected.

HYPNUM (Eurhynchium) COLPOPHYLLUM Sull. — This species has two forms of leaves which often occur on the same plant. The younger are the narrower (ovate to lance-ovate), while the older are broader (elliptic). The narrow form approaches most closely the figures of Sullivant's Icones Muscorum Suppl. pl. 71; the wider are more like those of *E. crassinervium*, but differ from them in the points named in the Manual, p. 353. These narrow leaves often predominate, in which case the aspect of the plants is quite different, so much so as to warrant a distinctive name. This narrow-leaved form of *H. colpophyllum* may be designated as var. **flagelliforme** n. var.: *leaves lance-ovate, small; branches long, almost flagelliform, attenuate*. In the type the branches are short and tumid-julaceous, leaves densely imbricate and elliptic-ovate. The apiculus is often very short, or the leaves may be simply acute. There is a considerable variation also in the size of the capsule.

NEW LOCALITIES. — The following new localities may be selected from a large number as being of special interest.

Bruchia Hallii Aust. has recently been sent me from Hockley, Texas, by Mr. F. W. Thurow, an interesting rediscovery of one of Hall's Texan mosses. — *Dicranum hyperboreum* Müll. was collected for the first time in the United States by Röll on Mt. Hood at 7000 ft. altitude. — Mr. J. M. Holzinger gathered a *Coscinodon* at Winona, Minn., which on comparison with the types proved to be *C. Rauli*, previously credited only to Colorado. — The same excellent collector sent also from this locality *Fabronia pusilla* Raddi, *Myurella Careyana* Sull. and *Leskea Austini* Sull.

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